

CONTRIBUTIONS TO A KNOWLEDGE OF AUSTRALIAN *CULICIDÆ*. No. ii.

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(Plates xxviii.-xxix.)

(From the Australian Institute of Tropical Medicine, Townsville.)

The present paper contains descriptions of five new species, besides additional records for previously known species. The new species are distributed in the following genera:—*Stegomyia* (one), *Neomacleaya* (one), *Culicada* (one), and *Culex* (two).

The males of *Myzorhynchus barbirostris* var. *bancrofti* Giles, and *Culicelsa paludis* Taylor, are also described for the first time. The type-specimens have been deposited in the Institute-collection.

MYZORHYNCHUS BARBIROSTRIS van d. Wulp, var. *BANCROFTI* Giles.

♂. Similar to ♀; unguis of forelegs unequal, the larger with a tooth, of the mid and hind equal and simple. Antennæ with black plumes; palpi black, with a median pale band on the first joint. Thorax, abdomen, wings, and legs similar to ♀. Length, 6 mm.

Hab.—Port Douglas, Queensland.

This is the first time the male has been described.

MUCIDUS ALTERNANS (Westw.).

Theobald, Mon. Culicid., v., p.125(1910).

Hab.—Normanton, N. Queensland (F. H. Taylor).

This species was fairly common, during July, in the long grass near waterholes.

STEGOMYIA PUNCTOLATERALIS Theobald.

The Entomologist, Vol. xxxvi., p.156(1903).

Hab.—Queensland: Eidsvold (Dr. Bancroft); Burketown, Townsville (F. H. Taylor).

STEGOMYIA ATRIPES (Skuse). (Pl. xxviii., fig. 1).

Scutomylia atripes (Skuse) Taylor, Proc. Linn. Soc. N. S. Wales, Vol. xxxviii., p. 750 (1913).

I placed this species in the genus *Scutomylia*, but having examined fresh specimens, I am convinced that the narrow-curved scales on the head are accidental, and have probably been misplaced from the thorax.

Hab. — New South Wales: Milson Island (Dr. Ferguson), Blackheath (W. A. Thompson).

STEGOMYIA QUASIORNATA, n.sp. (Pl. xxviii., fig. 2).

♂. Head black-scaled, with a band of greyish-blue scales round the eyes. Thorax pale, scantily clothed with small narrow-curved scales. Abdomen black, with prominent apical white spots, legs black, femora with two prominent white spots.

♀. Head black-scaled, with a border of greyish-blue scales round the eyes — deep blue in some lights — with black upright-forked scales at the base; antennæ black, verticillate hairs black, basal lobes testaceous; palpi black, with numerous black bristles; proboscis black.

Thorax yellowish, with a median and two lateral darker areas scantily clothed with small, black, narrow-curved scales; prothoracic lobes yellowish, clothed with small, black, flat scales; scutellum yellow, clothed with small, black, outstanding, flat scales; pleuræ densely clothed with white, flat scales.

Abdomen clothed with black scales, second segment with a small basal white spot, segments two to seven with prominent white apical spots; venter white-scaled.

Legs black-scaled, coxæ densely clothed with white scales; femora creamy beneath, with two white spots above on the apical third; tibiæ and tarsi black; ungues small, equal and simple.

Wings: costa black, spinose, veins clothed with dusky-brown scales, lateral vein-scales very scanty, fringe dusky; first fork-cell longer and narrower than the second, base of the latter nearer the base of the wing, their stems almost as long as their cells; anterior basal cross-vein longer than, and about one-half

its length from the anterior cross-vein. Halteres with pale stems, and black knobs.

Length, 4.5 mm.

Hab.—Innisfail, Queensland (F. H. Taylor).

Apparently closely related to *S. ornata* mihi, but may be distinguished from it by the wing-characters, abdominal markings, and the spots on the femora.

PSEUDOSKUSEA BASALIS Taylor.

Ann. Report Commissioner Public Health, Queensland, p.27 (1912).

Hab.—Darwin, Melville Island, Northern Territory (F. H. Hill).

MACLEAYA TREMULA Theobald.

The Entomologist, Vol. xxxvi., p.155 (1903).

Hab.—Darwin, Point Charles, Northern Territory (G. F. Hill); Cairns, Queensland (F. H. Taylor).

NEOMACLEAYA AUSTRALIS, n.sp. (Pl. xxviii., fig.3).

Head clothed with brown scales. Abdomen black, unbanded. Legs brown. Thorax dark brown.

♀. Head clothed with light brown, flat, and black upright-forked scales, with a median line of pale brown narrow-curved ones; palpi black-scaled; antennæ dark brown, basal lobes brown; proboscis black.

Thorax dark chestnut-brown, clothed with bronzy-brown, narrow-curved scales; scutellum brown, clothed with bronzy-brown, narrow-curved scales.

Abdomen black-scaled, with lateral basal spots to all the segments; venter pale-scaled.

Legs brown, femora pale beneath; ungues equal and simple.

Wings with the costa spinose, veins clothed with black scales, first fork-cell longer, and about the same width as, the second, base of the former nearer the base of the wing; stem of the first fork-cell about one-third the length of its cell; stem of the second about two-

thirds the length of the cell; anterior basal cross-vein longer than, and about its own length from, the anterior basal; halteres dusky.

Length, 4.5 mm.

Hab.—Halifax, North Queensland (F. H. Taylor).

Described from specimens taken at Halifax. It may be distinguished from *N. indica* Theobald, by its unbanded abdomen, uugues, and wing-venation.

REEDOMYIA PAMPANGENSIS Ludlow.

Canadian Entomologist, Vol. xxxvii., p. 94 (1905).

A species, sent by Mr. G. F. Hill, differs slightly from the type in having the narrow-curved scales of the head uniformly pale. The thoracic markings are also very indefinite.

Hab.—Doctor's Gully, Northern Territory.

CULICADA MILSONI, n.sp.

Head clothed with pale, narrow-curved, and mixed pale and black, upright-forked scales, with black and white flat lateral ones. Thorax clothed with pale and dark brown narrow-curved scales, with white flat ones immediately in front of the scutellum. Abdomen with white basal bands. Tarsi with white basal banding.

♂. Head clothed with pale, narrow-curved, and pale black, upright-forked scales, with a large patch of brown narrow-curved ones on either side, separated from the eyes by a fringe of white narrow-curved scales, lateral ones flat, a narrow white patch above, then a large black patch; palpi black, shorter than the proboscis, apex of the second joint, and the third and fourth joints with black hairs beneath, second joint with a white, almost basal band, and another at the apex of the middle third, third and apical joints with white basal bands; antennæ with the nodes, last two segments, and plumes black, basal lobes pale, covered with white, flat scales; proboscis black.

Thorax dusky brown, clothed with dark brown, narrow-curved scales, with pale ones in the middle of the anterior half, and white ones on the lateral and anterior margins; and a patch of white, flat ones immediately in front of the scutellum, the latter brown, the mid-lobe with mixed flat, and narrow-curved, white scales, lateral

lobes with narrow-curved ones, border-bristles black; prothoracic lobes prominent, clothed with white spindle-shaped scales; pleuræ brown, clothed with patches of white, flat scales.

Abdomen black, with white basal bands on segments two to five; venter denuded.

Legs black, fore- and mid-femora mottled beneath, hind- with the basal half white-scaled, the rest mottled; first and second tarsi of fore- and mid-legs with narrow, white, basal banding, the rest unbanded; first four tarsals of the hind-legs with broad, white, basal banding, fifth unbanded; unguis of fore-legs unequal, the larger with two teeth, the smaller with a single tooth, mid-unguis unequal, each with a single tooth, hind- equal and uniserrate. There is a thin and fairly long appendage, hairy at its apex, with its origin at the base of the fourth tarsus of the mid-leg, extending to the apex of the fifth.

Wings with the veins clothed with black scales; first fork-cell longer, and about the same width as the second, stem of the former about three-fourths of its cell, stem of the latter longer than the cell, base of the first fork-cell nearer the base of the wing; anterior basal cross-vein longer than, and about one-half its length from the anterior cross-vein, fringe dusky, halteres with pale stems and black knobs.

♀. Similar to ♂. Palpi black, with a few black bristles, second and third joints with white apical spots, apex white; antennæ black, unguis all equal and uniserrate.

Wings more heavily scaled than in the ♂; anterior basal cross-vein about its own length distant from the anterior cross-vein, stem of the first fork-cell about one-third, of the second about two-thirds the length of the cells.

Length, 5.5 mm. ♂; 6 mm. ♀.

Hab.—Milson Island, N.S. Wales.

I am indebted to Dr. E. W. Ferguson for one male and three females of the above species. It is readily separated from its congeners, owing to the thoracic clothing and the male unguis. The appendage on the tarsus of the mid-legs is very curious.

Two of the females show white, basal spots, instead of bands, but in other respects are typical.

Type ♂ in Coll. Dr. Ferguson

CULICELSA PALUDIS Taylor.

Rep. Aust. Inst. Trop. Med., 1911, p. 56 (May, 1913).

♂. Palpi black, with two pale bands on the second segment, one at the apex of the basal third, and one opposite the band on the proboscis, the third and apical segments also with basal pale banding, apex of apical segment also pale; antennæ with the last two segments brown, plumes dark brown; wing-venation similar to ♀, though it is not so heavily scaled; ungues of fore- and mid-legs unequal and uniserrate; of the hind- small, equal, and simple. Length, 5 mm.

The following is a description of the female wing, which was omitted from the original description through an error.

Costa black-scaled, veins clothed with dark brown scales; first fork-cell longer and narrower than the second, base of the latter nearer the base of the wing than that of the former; stems of the fork-cells about two-thirds the length of their cells; anterior basal cross-vein about twice its own length from the anterior cross-vein.

Hab.—Darwin, Northern Territory (G. F. Hill).

CULEX MOSSMANI, n sp. (Pl. xxix., figs.4-5).

Head clothed with grey, narrow-curved, and black upright-forked scales, and flat, white ones laterally. Thorax with pale narrow-curved scales. Abdomen with basal bands; tarsi with basal and apical banding.

♂. Head clothed with grey, narrow-curved, and numerous black, upright-forked scales, and flat, white ones laterally; proboscis black, with a creamy band on its apical third; palpi black, first segment with a broad band at the base of the apical third, a basal band on the third and apical segments, the latter also with the apex broadly banded; antennæ pale, nodes black, last two segments brown, plumes dusky.

Thorax dark brown, clothed with pale, narrow-curved scales; scutellum similar to thorax; prothoracic lobes prominent, with

numerous light brown hairs; metanotum brown, pleuræ dark brown.

Abdomen clothed with chocolate-brown scales, and basal creamy bands, incomplete on segments five to seven; venter apparently similar to dorsum.

Legs black, femora pale beneath, tibiæ, first and second tarsals with creamy apical and basal banding, third basally banded; ungues of fore- and mid-legs unequal, each with a single tooth, hind- small, equal and simple.

Wings with the veins clothed with black scales, with three creamy spots on the costa, the basal one above the base of the anterior branch of the fifth long vein; the apical spot is situated at the apex of the first long vein, the second spot is midway between the other two, and extends to the base of the first fork-cell, the basal and apical spots extend to the first long vein, the anterior branch of the fifth vein is also creamy except the base and apex: first fork-cell longer, and narrower than the second, their stems about two-thirds the length of the cells, base of the second nearer the base of the wing; anterior basal cross-vein longer than, and about four times its length from the anterior cross-vein; fringe dusky, except at the apex of the posterior branch of the fifth long vein, where it is pale; halteres pale.

♀. Similar to the ♂. Palpi black, apex pale; antennæ dark brown, basal lobes pale, base of second segment pale; ungues all equal and simple; wings similar but more heavily scaled.

Length, ♂ 4; ♀ 4·5 mm.

Hab.—Mossman, Northern Queensland.

This species is closely related to *Culex mimeticus*. The wing-ornamentation and leg-banding are, however, quite distinct. It was bred from larvæ by Drs. Breinl and Priestley.

CULEX NORMANENSIS, n.sp. (Pl. xxix., fig.6).

Head clothed with pale, narrow-curved scales, and pale, flat ones on the sides. Abdomen with basal spots. Legs black, tarsi with white basal banding.

♂. Head clothed with grey, narrow-curved, and black, upright-forked scales, and pale, flat ones at the sides; palpi black, last two joints densely clothed with black hairs; antennæ densely clothed with black plumes; proboscis black; eyes blue-black.

Thorax brown, clothed with brown, narrow-curved scales; scutellum paler, clothed with pale scales, border-bristles pale, and long; pleuræ brown, clothed with small, white, flat scales; metanotum brown, prothoracic lobes prominent, clothed with dark, narrow-curved scales.

Abdomen brown clothed with brown scales, and with median, white, basal spots to the segments, which extend to the sides in some specimens; venter brown.

Legs brown, femora and tibiæ mottled with white scales, first and second tarsals of fore- and mid-legs with narrow, basal banding; first three tarsals of hind-legs with narrow basal banding, ungues of fore-legs unequal, the larger with two teeth and the smaller with one, of mid-legs unequal, each with a single tooth, hind- equal and simple.

Wings: costa black, vein-scales dark brown, first fork-cell longer and narrower than the second, base of the latter nearer the base of the wing, their stems nearly the length of their cells; anterior basal cross-vein longer than, and about its own length from, the anterior cross-vein. Halteres pale.

♀. Similar to ♂. Palpi black; antennæ brown. Thorax clothed with bronzy-brown, narrow-curved scales.

Wings similar to ♂, but more densely clothed. Ungues of fore- and mid-legs equal and uniserrate, of hind-legs equal and simple.

Length, ♂ 3·5-4; ♀ 4·4-5 mm.

Hab.—Normanton, Queensland (F. H. Taylor).

Described from a series of each sex, which were bred from larvæ.

CHRYSOCONOPS AURITES Theobald.

Mon. Culicid., ii., p. 209 (1903).

Hab.—Banker's Jungle, Northern Territory (G. F. Hill).

SKUSEA FUNEREA Theobald.

Mon. Culicid., iii., p. 292 (1903).

Hab.—Darwin, Northern Territory (G. F. Hill); Cairns, Innisfail, Queensland (F. H. Taylor).

SKUSEA UNIFORMIS Theobald.

Rec. Ind. Mus. iv., p. 33 (1910).

Hab.—Cairns, Queensland (F. H. Taylor).

I am unable to find any distinctions between specimens from the above locality, and Theobald's description.

HODGESIA TRIANGULATUS Taylor.

Trans. Ent. Soc. Lond., 1914, Part i., p. 204.

Hab.—Darwin, N. Territory (G. F. Hill); Innisfail, Queensland (E. Jarvis and F. H. Taylor).

This species was originally described by me from Lakekamu Gold Fields, Papua.

EXPLANATION OF PLATES XXVIII.-XXIX.

Plate xxviii.

Fig. 1.—*Stegomyia atripes* (Skuse), ♀; wing.

Fig. 2.—*S. quasiornata*, n.sp., ♀; wing.

Fig. 3.—*Neomacleaya australis*, n.sp., ♀; wing.

Plate xxix.

Fig. 4.—*Culex mossmani*, n.sp., ♂; head.

Fig. 5.—*C. mossmani*, n.sp., ♀; wing.

Fig. 6.—*C. normanensis*, n.sp., ♀; wing.